DM-TX-400-3G

Wall Plate DigitalMedia™ CAT Transmitter 400

The DM-TX-400-3G is a DM CAT transmitter that installs in a triple-gang wall box to provide a convenient interface for computers and high-definition AV sources as part of a complete **DigitalMedia** system. With a complete assortment of HDMI, RGB, and analog video inputs, the DM-TX-400-3G is ideal for wall, lectern, and floor box applications in a boardroom, classroom, or residence to provide an input for a laptop computer and a variety of AV source. It connects to any DM-MD series DigitalMedia switcher or **DM-RMC-100** Room Controller via a single DM cable.

DigitalMedia™

As the leader in HDMI and control system technologies, Crestron has developed DigitalMedia, the first complete HD AV distribution system that takes HDMI to a higher level, and allows virtually any mix of AV sources to be distributed throughout the home, office, school, or virtually any other facility.

DigitalMedia distributes uncompressed digital video and audio signals up to 450 feet (137 m) using DM cable, or shorter distances using standard CAT5e/6[1]. DigitalMedia thoughtfully manages all of the different signals and devices, matching each source's output to the capabilities of the selected display(s) without using scaling or compression. Every signal is preserved in its native video resolution and audio format, ensuring a pure, lossless signal path throughout.

Multimedia Computer/AV Interface

Via its HDMI input, the DM-TX-400-3G supports HDMI 1.3a and HDCP, handling WUXGA computer resolutions and 1080p60 HDTV with multi-channel lossless audio. The HDMI input can also handle DVI and DisplayPort Multimode signals using an appropriate adapter or dongle[2]. The RGB input handles all analog RGB signals up to WUXGA 1920x1200 pixels. Separate component and composite video inputs are also provided, supporting standard and high-def signals up to 1080p60[3]. Both digital and analog audio signals are supported via HDMI, S/PDIF, RCA, and mini-TRS inputs.

Used with a single **DM-RMC-100** Room Controller and optional Crestron Control System, the DM-TX-400-3G affords a very simple solution for extending a multimedia computer or AV signal to a single display up to 450 feet (137 m) away[1]. As part of a larger system using a DM-MD series switcher, multiple DM-TX-400-3Gs may be installed to enable the distribution of several sources at different locations to feed multiple displays throughout any room or larger facility.

Keyboard/Mouse Extender

Also, when connected to a DM-MD series switcher, the DM-TX-400-3G functions as a keyboard/mouse extender, allowing a USB HID-compliant keyboard and/or mouse at the podium or conference table to control a computer or other host device located at the central equipment rack.

EDID Format Management

The DM-TX-400-3G allows for management of the EDID (Extended Display Identification Data) information that passes between the input source and display devices in the system. Using **Crestron Toolbox™** software, the format and resolution capabilities of each device can be assessed and managed through the DM-TX-400-3G, ensuring reliable operation by instructing sources to output only the resolutions and formats that can be handled by the displays and system wiring.

CEC Embedded Device Control

The primary objective of every Crestron system is to enable precisely the control desired for a seamless user experience. DigitalMedia provides an

alternative to conventional IR and RS-232 device control by harnessing the CEC (Consumer Electronics Control) signal embedded in HDMI. Through its connection to the control system, the DM-TX-400-3G provides a gateway for controlling the connected source device right through the HDMI connection, potentially eliminating the need for any dedicated control wires or IR probes. Through proper CEC signal management, DigitalMedia allows you to take control of each device in the system as you like.

Simple Wall Mount Design

The DM-TX-400-3G is designed to be wall mounted using a standard electrical box or plaster ring. The DM cable is terminated to the rear of the transmitter using screw terminals. An array of indicators on the front of the DM-TX-400-3G provides for easy setup and troubleshooting, verifying the status of connections and signal activity at a glance. Advanced configuration is enabled through **Crestron Toolbox™** software.

A Digital Upgrade for Legacy Systems

The DM-TX-400-3G also affords a perfect signal converter for integrating DigitalMedia with analog-based systems like Crestron **MPS**, **QuickMedia®** , and the CEN-RGBHV Series. A simple DB15HD VGA cable connected between the output of an MPS system and the input of the DM-TX-400-3G allows every RGB, component, S-Video, and composite video input on the MPS to be converted to DigitalMedia[3]. Analog audio is converted similarly through a simple unbalanced stereo audio cable. The DM-TX-400-3G's HDMI input may also be used to expand the input capabilities of the MPS system to handle digital AV sources.

Please refer to the DigitalMedia Design Guide, Doc. #4789 for additional information.

> DigitalMedia transmitter and multimedia interface

> DM CAT output supports up to 450 ft cable length[1]

> 3-gang wall mount design

> Fits in a FSR FL-500P-6 Floor Box

> Provides HDMI, RGB, component, and composite video inputs

> Also supports DVI and DisplayPort Multimode

sources[2]

> Includes S/PDIF, RCA, and mini-TRS audio inputs

> Provides onboard auto-switching capability

> Includes USB HID keyboard/mouse port

> Affords single-wire connection to a DM-RMC-100 or DM-MD switcher

> Detects and reports detailed video and audio input information

> Performs automatic AV signal format management via EDID

> Enables device control via CEC

> Easy setup and diagnostics tools via software

> Extends the life of analog-based AV systems

SPECIFICATIONS

Video

Input Signal Type: HDMI, DVI[2], DisplayPort Multimode[2], RGB, component (YPbPr)[3], S-Video (Y/C)[3], composite[3]
Output Signal Type: DM CAT (DigitalMedia over twisted-pair copper wire)
Formats: HDMI v.1.3a, DVI v.1.0, HDCP v.1.2 content protection support, RGBHV up to UXGA/WUXGA, HDTV up to 1080p60, NTSC or PAL
Input Resolutions, HDMI & DVI, Progressive: 640x480@60Hz, 720x480@60Hz (480p), 720x576@50Hz (576p), 800x600@60Hz, 848x480@60Hz, 852x480@60Hz, 854x480@60Hz, 1024x768@60Hz, 1024x852@60Hz, 1024x1024@60Hz, 1280x720@50Hz (720p50), 1280x720@60Hz (720p60), 1280x768@60Hz, 1280x800@60Hz, 1280x960@60Hz, 1280x1024@60Hz, 1360x768@60Hz, 1365x1024@60Hz, 1366x768@60Hz, 1400x1050@60Hz, 1440x900@60Hz, 1600x900@60Hz, 1600x1200@60Hz, 1680x1050@60Hz, 1920x1080@24Hz (1080p24), 1920x1080@25Hz (1080p25), 1920x1080@50Hz (1080p50), 1920x1080@60Hz (1080p60), 1920x1200@60Hz, 2048x1080@24Hz, 2048x1152@60Hz, plus any other resolution allowed by HDMI v.1.3a up to 165MHz pixel clock
Input Resolutions, HDMI & DVI, Interlaced: 720x480@30Hz (480i), 720x576@25Hz (576i), 1920x1080@25Hz (1080i25), 1920x1080@30Hz (1080i30), plus any other resolution allowed by HDMI v.1.3a up to 165MHz pixel clock
Input Resolutions, RGB: 640x480@60Hz, 720x480@60Hz (480p), 720x576@50Hz (576p), 800x600@60Hz, 848x480@60Hz, 1024x768@60Hz, 1280x720@50Hz (720p50), 1280x720@60Hz (720p60), 1280x768@60Hz, 1280x800@60Hz, 1280x960@60Hz, 1280x1024@60Hz, 1360x768@60Hz, 1366x768@60Hz, 1400x1050@60Hz, 1440x900@60Hz, 1600x1200@60Hz, 1680x1050@60Hz, 1920x1080@24Hz (1080p24), 1920x1080@50Hz (1080p50), 1920x1080@60Hz (1080p60), 1920x1200@60Hz, 2048x1080@24Hz, 2048x1152@60Hz
Input Resolutions, Component[3]: 480i, 576i, 480p, 576p, 720p50, 720p60, 1080i25 (1125 lines), 1080i30, 1080p24, 1080p30, 1080p50 (1125 lines), 1080p60
Input Resolutions, Composite and S-Video[3]: 480i, 576i
Output Resolutions: Matched to inputs
Analog-To-Digital Conversion: 10-bit 165 MHz per each of 3 channels

Audio

Input Signal Types: HDMI v.1.3a, DisplayPort Multimode[2], analog stereo
Output Signal Type: DM CAT
Formats, HDMI: Dolby® Digital 5.1, Dolby Digital EX 5.1, DTS 5.1, DTS-ES Matrix 5.1, DTS-ES Discrete 6.1, DTS 96/24 5.1, up to 8ch PCM
Formats, Analog: Stereo 2-channel

USB

Protocols: Supports USB HID class devices

Connectors - Front

AUDIO IN: (1) 3.5mm TRS mini phone jack;
Unbalanced stereo line-level audio input;
Input Impedance: 10k ohms;
Input Level: 2 Vrms maximum
USB HID: (1) USB Type A female;
USB 1.1 device port for mouse, keyboard, game controller, or other USB HID-compliant device
HDMI IN: (1) 19-pin Type A HDMI female;
HDMI digital video/audio input;
Also supports DVI and DisplayPort Multimode[2]
PC IN: (1) DB15HD female, RGB (VGA) or component (YPbPr) video input[3];
Formats: RGBHV, RGBS, RGsB, YPbPr;
Input Levels: 0.5 to 1.5 Vp-p with built-in DC restoration;
Input Impedance: 75 ohms;
Sync Input Type: Autodetect RGBHV, RGBS, RGsB, YPbPr;
Sync Input Level: 3 to 5 Vp-p;
Sync Input Impedance: 1k ohms
SPDIF: (1) RCA female;
S/PDIF coaxial digital audio input;
Input Impedance: 75 ohms;
Input Level: 0.5 Vrms nominal
Y, Pb, Pr: (3) RCA female comprising (1) component (YPbPr) video input;
Input Level: 1 Vp-p nominal;
Input Impedance: 75 ohms nominal
VID: (1) RCA female, composite video input;
Input Level: 1 Vp-p nominal;
Input Impedance: 75 ohms nominal
L, R: (2) RCA female;
Unbalanced stereo line-level audio input;
Maximum Input: 2 Vrms
Input Impedance: 15k ohms

Connectors - Rear

D, M: (1) DM CAT output composed of (16) captive screw terminals with (2) grounded strain reliefs;
Connects to DM CAT input of a DM switcher, receiver/room controller, or other DM device via **DM-CBL** or **CresCAT-D** cable[1]
G B A 24: (1) DMNet port composed of (4) captive screw terminals;
Connects to DMNet port of a DM switcher, receiver/room controller, or other DM device via **DM-CBL** or **CresCAT-D** cable
G: (1) Flying lead, chassis ground connection

DM Cable Length

Cable Type:
DM-CBL DigitalMedia CableMaximum length without, between, before, or after repeaters:

- **200 ft (60 m) for 720p, 1080i, 1080p24**
- 200 ft (60 m) for 1024x768 @75Hz
- 150 ft (45 m) for 1080p60
- 150 ft (45 m) for 1280x1024 @75Hz
- 150 ft (45 m) for 1920x1200 @60Hz
- 125 ft (38 m) for 1600x1200 @60Hz

Maximum total length using up to 3 repeaters:

- 450 ft (137 m) for 720p, 1080i, 1080p24
- 450 ft (137 m) for 1024x768 @75Hz
- 450 ft (137 m) for 1080p60
- 450 ft (137 m) for 1280x1024 @75Hz
- 450 ft (137 m) for 1920x1200 @60Hz

- 450 ft (137 m) for 1600x1200 @60Hz

Cable Type:
CresCAT-D Crestron Home® CAT5 AV CableMaximum length between, before, or after repeaters:

- **150 ft (45 m) for 720p, 1080i, 1080p24**
- 150 ft (45 m) for 1024x768 @75Hz
- 100 ft (30 m) for 1080p60
- 100 ft (30 m) for 1280x1024 @75Hz
- 100 ft (30 m) for 1920x1200 @60Hz
- 75 ft (23 m) for 1600x1200 @60Hz

Maximum total length using up to 3 repeaters:

- 400 ft (120 m) for 720p, 1080i, 1080p24
- 400 ft (120 m) for 1024x768 @75Hz
- 400 ft (120 m) for 1080p60
- 400 ft (120 m) for 1280x1024 @75Hz
- 400 ft (120 m) for 1920x1200 @60Hz
- 400 ft (120 m) for 1600x1200 @60Hz

Controls & Indicators

PWR: (1) green LED, indicates operating power supplied via DMNet
RESET: (1) miniature recessed pushbutton for hardware reset
SETUP: (1) red LED and (1) miniature recessed pushbutton for Ethernet auto-discovery
DM LINK: (1) green LED, indicates connection to a downstream DM device
HDMI: (1) green LED, indicates HDMI input signal presence and lock status
PC: (1) green LED, indicates PC input signal presence and lock status
YPbPr: (1) green LED, indicates YPbPr input signal presence and lock status
PC: (1) green LED, indicates VID input signal presence and lock status

Power Requirements

DMNet Power Usage: TBD

Environmental

Temperature: 32° to 104°F (0° to 40°C)
Humidity: 10% to 90% RH (non-condensing)
Heat Dissipation: TBD

Enclosure

Construction: Metal, black matte powder coat finish
Flush Wall Mount: 3-gang mountable in a standard electrical box (2-1/2 inch deep minimum); requires decorator style faceplate (not included)

Dimensions

Height: 4.12 in (105 mm)
Width: 5.30 in (135 mm)
Depth: 2.53 in (64 mm)

Weight

TBD

Available Models

DM-TX-400-3G: Wall Plate DigitalMedia™ CAT Transmitter 400
[Available February, 2010]

Available Accessories

DM-CBL-NP-SP500: DigitalMedia™ Cable, non-plenum, 500 ft spool
DM-CBL-P-SP500: DigitalMedia™ Cable, plenum-rated, 500 ft spool
DM-CONN-20: DigitalMedia™ Cable Connectors, 20-Pack
DM-DR: DigitalMedia™ Repeater
CBL-HD-1.5: Crestron® Certified HDMI™ Interface Cable, 1.5 ft
CBL-HD-3: Crestron® Certified HDMI™ Interface Cable, 3 ft
CBL-HD-6: Crestron® Certified HDMI™ Interface Cable, 6 ft
CBL-HD-12: Crestron® Certified HDMI™ Interface Cable, 12 ft
CBL-HD-20: Crestron® Certified HDMI™ Interface Cable, 20 ft
CBL-HD-30: Crestron® Certified HDMI™ Interface Cable, 30 ft
CBL-HD-DVI-1.5: Crestron® Certified HDMI™ to DVI Interface Cable, 1.5 ft
CBL-HD-DVI-3: Crestron® Certified HDMI™ to DVI Interface Cable, 3 ft
CBL-HD-DVI-6: Crestron® Certified HDMI™ to DVI Interface Cable, 6 ft
CBL-HD-DVI-12: Crestron® Certified HDMI™ to DVI Interface Cable, 12 ft
CBL-HD-DVI-20: Crestron® Certified HDMI™ to DVI Interface Cable, 20 ft
CBL-HD-DVI-30: Crestron® Certified HDMI™ to DVI Interface Cable, 30 ft
CBL-DP-HD-1.5: Crestron® Certified DisplayPort to HDMI™ Interface Cable, 1.5 ft
[Release Date: TBA]
CBL-DP-HD-3: Crestron® Certified DisplayPort to HDMI™ Interface Cable, 3 ft
[Release Date: TBA]
CBL-DP-HD-6: Crestron® Certified DisplayPort to HDMI™ Interface Cable, 6 ft
[Release Date: TBA]
CBL-DP-HD-12: Crestron® Certified DisplayPort to HDMI™ Interface Cable, 12 ft
[Release Date: TBA]
CBL-DP-HD-20: Crestron® Certified DisplayPort to HDMI™ Interface Cable, 20 ft
[Release Date: TBA]
CBL-DP-HD-30: Crestron® Certified DisplayPort to HDMI™ Interface Cable, 30 ft
[Release Date: TBA]
CBL-VGA-1.5: Crestron® Certified Computer VGA Interface Cable, 1.5 ft
CBL-VGA-3: Crestron® Certified Computer VGA Interface Cable, 3 ft
CBL-VGA-6: Crestron® Certified Computer VGA Interface Cable, 6 ft
CBL-VGA-12: Crestron® Certified Computer VGA Interface Cable, 12 ft
CBL-VGA-25: Crestron® Certified Computer VGA Interface Cable, 25 ft
CBL-VGA-50: Crestron® Certified Computer VGA Interface Cable, 50 ft
[Available January, 2010]
CBL-VGA-75: Crestron® Certified Computer VGA Interface Cable, 75 ft
[Available January, 2010]

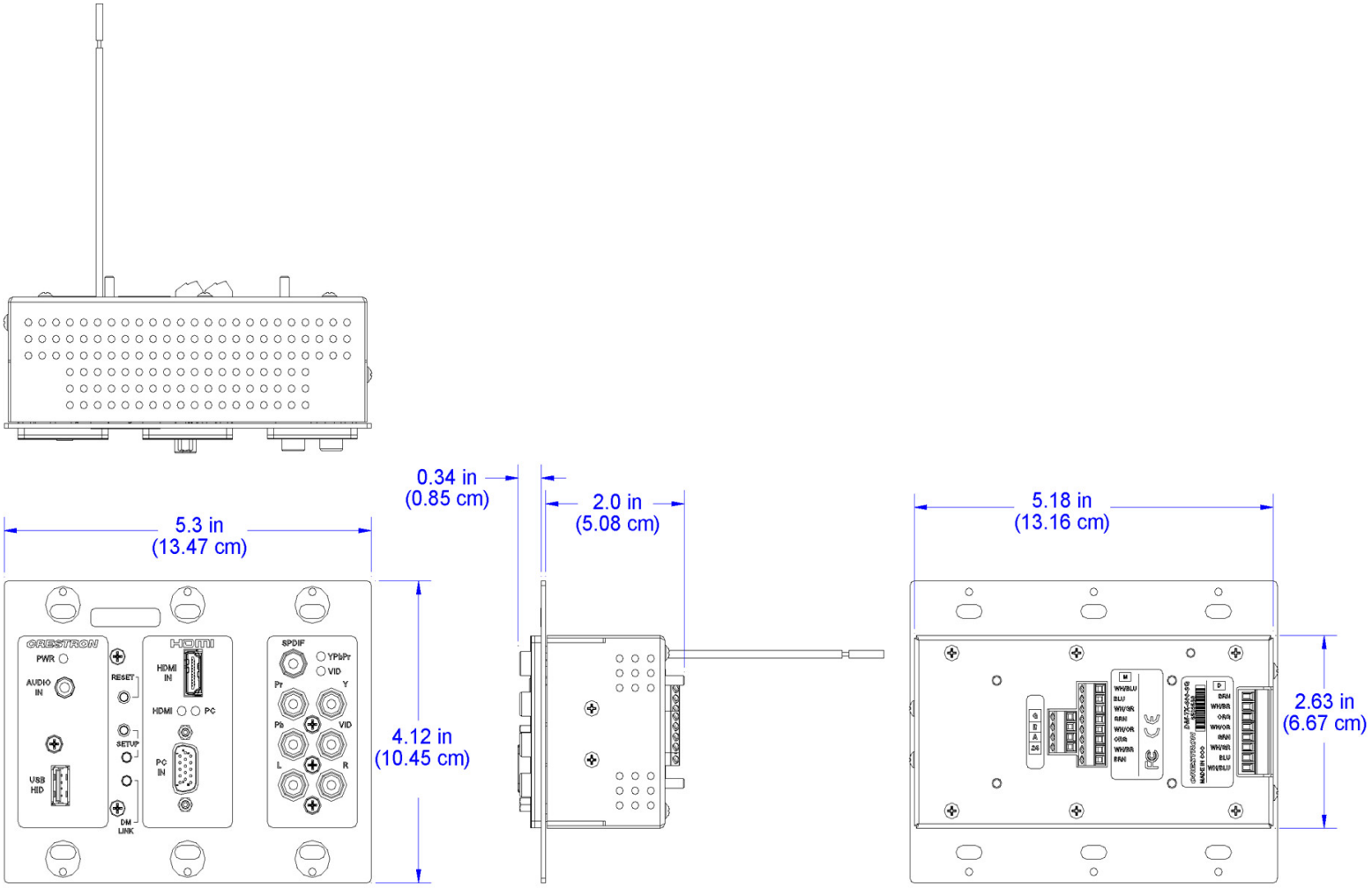
CBL-VGA-AUD-3: Crestron® Certified Computer VGA Interface Cable w/Audio, 3 ft
[Release Date: TBA]
CBL-VGA-AUD-6: Crestron® Certified Computer VGA Interface Cable w/Audio, 6 ft
[Release Date: TBA]
CBL-VGA-AUD-12: Crestron® Certified Computer VGA Interface Cable w/Audio, 12 ft
[Release Date: TBA]
CBL-VGA-AUD-25: Crestron® Certified Computer VGA Interface Cable w/Audio, 25 ft
[Release Date: TBA]
CBL-VGA-AUD-50: Crestron® Certified Computer VGA Interface Cable w/Audio, 50 ft
[Release Date: TBA]
CBL-VGA-AUD-75: Crestron® Certified Computer VGA Interface Cable w/Audio, 75 ft
[Release Date: TBA]
CBL-AUDIO-1.5: Crestron® Certified Mini-TRS Stereo Audio Interface Cable, 1.5 ft
CBL-AUDIO-3: Crestron® Certified Mini-TRS Stereo Audio Interface Cable, 3 ft
CBL-AUDIO-6: Crestron® Certified Mini-TRS Stereo Audio Interface Cable, 6 ft
CBL-AUDIO-12: Crestron® Certified Mini-TRS Stereo Audio Interface Cable, 12 ft
CBL-RCA-1.5: Crestron® Certified RCA Composite Video Interface Cable, 1.5 ft
CBL-RCA-3: Crestron® Certified RCA Composite Video Interface Cable, 3 ft
CBL-RCA-6: Crestron® Certified RCA Composite Video Interface Cable, 6 ft
CBL-RCA-12: Crestron® Certified RCA Composite Video Interface Cable, 12 ft
CBL-RCA3-1.5: Crestron® Certified RCA Component Video Interface Cable, 1.5 ft
CBL-RCA3-3: Crestron® Certified RCA Component Video Interface Cable, 3 ft
CBL-RCA3-6: Crestron® Certified RCA Component Video Interface Cable, 6 ft
CBL-RCA3-12: Crestron® Certified RCA Component Video Interface Cable, 12 ft
CBL-RCA2-1.5: Crestron® Certified RCA Stereo Audio Interface Cable, 1.5 ft
CBL-RCA2-3: Crestron® Certified RCA Stereo Audio Interface Cable, 3 ft
CBL-RCA2-6: Crestron® Certified RCA Stereo Audio Interface Cable, 6 ft
CBL-RCA2-12: Crestron® Certified RCA Stereo Audio Interface Cable, 12 ft

Notes:
1. For DigitalMedia CAT wiring, use **DM-CBL** DigitalMedia Cable, **CresCAT-D**, or quality CAT5e/CAT6 cable. Do NOT use low-skew cable. The maximum allowable cable length depends on multiple factors. One or more DM Repeaters (Model **DM-DR**) may be required. Refer to the Crestron DigitalMedia Design Guide, Doc. #4789 for complete wiring guidelines.

2. HDMI requires an appropriate adapter or interface cable to accommodate a DVI or DisplayPort Multimode signal. **CBL-HD-DVI** and **CBL-DP-HD** interface cables available separately.

3. The RGB input can accept component, composite, and S-Video signals through an appropriate adapter (not included) or direct interface to Crestron **MPS** Series products. Input sync detection is not provided for composite or S-Video signal types through the RGB connection.

DM-TX-400-3G



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